

REMARKS

I. Introduction

In response to the Office Action dated November 12, 2004, Applicants have amended claims 1-2, 4-7, 12-13, 17, 21 and 23-24 so as to correct several minor grammatical errors and to further clarify the claimed invention. Support for these amendments can be found, for example, in Fig. 1 and its corresponding section of the specification. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Rejection of Claims 1-28 Under 35 U.S.C. § 102

Claims 1-28 are rejected under 35 U.S.C. § 102(e), as being anticipated by USP No. 6,505,255 to Akatsu. Applicants respectfully traverse this rejection for at least the following reasons.

As a preliminary matter, it is noted that the pending rejection references various portions of Akatsu as allegedly disclosing the claimed features, but does not identify precisely which elements (either by reference numerals or by written explanation) of Akatsu are being read on the respective claimed features. If the Examiner maintains the pending rejection, it is respectfully requested that the Examiner identify which specific element of Akatsu reads on *each* and *every* limitation recited in the pending claims rather than merely pointing Applicants to wide-ranging disclosures of Akatsu so as afford the Applicants an opportunity to rebut and/or address the specific elements identified as reading on the pending claims.

Nevertheless, it is respectfully submitted that Akatsu does not disclose or suggest the claimed invention. In the pending Office Action, the Examiner relies on col. 6, lines 40-67 of Akatsu as allegedly disclosing “a second interface unit including plural types of physical layers for connecting to an internal network.” However, Applicants respectfully disagree with the Examiner’s interpretation, because Akatsu discloses only that the personal computer 524/946 (alleged second interface unit) is connected to the *external network* 904 via the I/P over 1394 link 612 (see, Figs 6 and 11). As such, Akatsu is completely silent as to connecting the personal computer 524/946 to an *internal network*. Nonetheless, in an effort to assist the Examiner in understanding the foregoing distinction, claim 1 has been amended to recite “a plurality of second interface units including plural types of physical layers for connecting to an internal network, and a controller [that] transmits and receives information among the plurality of second interface units.”

Specifically, as described in Applicants’ specification, when the PC 304a of the conventional network system sends an electronic mail (E-mail) to the Internet 301 through the router 302, the access to the Internet 301 by the PC 304b is halted, because the Ethernet transmission line 303 is occupied by the PC 304a. One conventional technique to solve the foregoing problem is to transmit and receive information by using a CSMA/CD (carrier sense multiple access/collision detect) method. However, Applicants have discovered that while the PC304a, 304b and 304c can access the Internet 301 at the same time in this method, the transmission speed suffers significantly. Additionally, when appliances such as AV apparatus, telephones, and facsimile equipment are incorporated therein, the conventional network system becomes complex and user-unfriendly. Accordingly, by utilizing a first interface unit having at least one physical layer connecting to an external

network, a plurality of second interface units having a plural types of physical layers for connecting to an internal network, and a controller for controlling the second interface units, a flexible and easy-to-use network system can be advantageously provided.

In contrast, Akatsu is completely silent as to the problems related to the conventional network system, let alone the means by which to solve such problems as conceived by Applicants. In this regard, Akatsu, at best, is merely cumulative to the admitted prior art described at pages 1-2 of Applicants' specification, because Akatsu is also subject to the same drawback of complex network and reduced transmission speed resulting from the external network 904 being accessed by the home appliances, such as the TV 936 and the PC unit 946, via the home gateway 504 all at the same time.

Even assuming *arguendo* that the Examiner's conclusion is proper, it is respectfully submitted that amended claim 1 does not merely recite a first interface unit connected to an external network, and a plurality of second interface units connected to an internal network. Rather, claim 1 also recites a controller for transmitting and receiving information among the second interface units. As discussed above, the Examiner may arguably have shown that Akatsu discloses a personal computer 524/946 connected to a network. However, Akatsu is completely silent with regard to a ***plurality*** of alleged second interface units connected to an ***internal*** network. Moreover, the Examiner appears to read the home gateway 504 of Akatsu as the claimed controller. However, in doing so, it is clear that the home gateway 504 merely transfers the data output from its interfaces connected to various appliances to the access network 924 through which respective services are provided. Therefore, the home gateway 504 does not appear to ***transmit*** any signal to the personal computer 524/946, let

alone manipulate the transmitted or received information *among* the alleged second interface units.

In contrast and in accordance with one exemplary embodiment of the present invention, the data can be exchanged between the client connected to the LAN I/F unit 6-1 and the client connected to the LAN I/F unit 6-N via the controller 2, such that the controller 2 functions as a hub if the physical layers of the clients are the same, or alternatively functions as a bridge if the physical layers of the clients are different. Accordingly, the isochronous data such as moving image and audio data can be transmitted and received effectively among the WAN I/F units and/or LAN I/F units.

With respect to claim 12, as this claim also includes the feature “a plurality of second interface units including plural types of physical layers for connecting to an internal network” and “the controller transmits and receives information among the plurality of second interface units,” it is respectfully requested that claim 12 and its dependent claims be allowed for reasons similar to those discussed above with respect to claim 1.

Thus, as anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, Akatsu fails to disclose or suggest the foregoing claim elements, it is clear that Akatsu does not anticipate claim 1 or 12, or any of the claims dependent thereon.

III. All Dependent Claims Are Allowable Because The Independent Claims From Which They Depend Are Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 12 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

IV. Conclusion

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

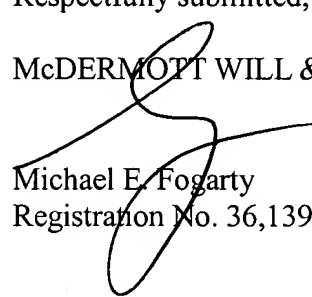
If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Serial No: 09/703,802

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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